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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,885	12/02/2003	Dale Eschenburg	60130-1957	3377

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EXAMINER

KIM, CHONG HWA

ART UNIT	PAPER NUMBER
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2167

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/725,885	Applicant(s) ESCHENBURG, DALE	
	Examiner Chong H. Kim	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 22-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 22-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 recites the limitation "said inlet" and "said cavity" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 6, 9-11, 22-24, and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Ries, U.S. Patent 4,468,981.

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Ries shows, in Figs. 1-6, an axle assembly comprising: an axle housing 11; a pump housing 112, 114, 115 attachable to cover an opening within the axle housing; a pump 130, 134 mounted within the pump housing, wherein the pump housing includes a cavity 144 or 145 defining a supply passage for communicating lubricant from a sump within the axle housing to the pump; an input shaft 35 supported by the pump housing and driving the pump; wherein the pump supplies lubricant from a sump 12 within the axle housing to a driveline component 161 supported within the axle housing; an annular passage 139 defined within the pump housing surrounding the input shaft; comprising a bearing 38, 39 supporting rotation of the input shaft mounted within the pump housing; wherein the pump comprises a rotor pump; wherein the rotor pump comprises a reversing ring 140 for directing oil flow in a first direction regardless of input shaft rotational direction; and wherein the pump housing comprises a bearing cage (the race for roller bearing 38) supporting rotation of the input shaft, wherein the bearing case is supported entirely within the pump housing independent of the axle housing and spaced an axial distance from the axle housing; including a pinion shaft 47 or 48 supported within the axle housing and driven by the input shaft.

5. Claims 1-6, 9-11, 22, and 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Aikawa et al., U.S. Patent 6,770,005 B2.

Aikawa et al. shows, in Figs. 1 and 2, an axle assembly comprising: an axle housing 11; a pump housing 13 attachable to cover an opening within the axle housing; a pump 93 mounted within the pump housing, wherein the pump housing includes a cavity defining a supply passage (surrounding the shaft 111) for communicating lubricant from a sump within the axle housing to

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the pump; an input shaft 39 supported by the pump housing and driving the pump; wherein the pump supplies lubricant from a sump 9 within the axle housing to a driveline components supported within the axle housing; an annular passage defined within the pump housing surrounding the input shaft (in the left most housing part that surrounds the shaft 111); wherein the input shaft comprises a lubricant passageway receiving lubricant from the pump and wherein the lubricant passageway comprises at least one outlet passage for distributing lubricant (as shown in Fig. 1 and disclosed in col. 13, lines 38-44); comprising a bearing 55 supporting rotation of the input shaft mounted within the pump housing; wherein the pump comprises a rotor pump (trochoid pump); wherein the rotor pump comprises a reversing ring for directing oil flow in a first direction regardless of input shaft rotational direction (inherent in trochoid pumps); and wherein the pump housing comprises a bearing cage (the races for bearing 55) supporting rotation of the input shaft, wherein the bearing cage is supported entirely within the pump housing independent of the axle housing and spaced an axial distance from the axle housing; including a pinion shaft 25 supported within the axle housing and driven by the input shaft.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ries in view of Shiba et al, U.S. Patent 5,311,740.

Ries shows, as discussed above in the rejection of claim 1, the axle assembly comprising the axle housing, the pump housing that covers the pump driven by the input shaft, but fails to show a filter housing and a relief valve.

Shiba et al. teaches, in Figs. 1-4, an axle assembly comprising an axle housing 1, a pump housing (the other half of the housing portion 1), a pump P2 mounted within the pump housing, an input shaft 3 to drive the pump, wherein the pump housing comprises a filter housing 25 for attachment of a lubricant filter and wherein the pump housing comprises a relief valve 32 for controlling lubricant pressure emitted from the pump.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the filter and the relief valve as taught by Shiba et al. in the axle assembly of Ries in order to provide a cleaner lubricant and a better pressure regulated distribution of lubricant in order to make the axle assembly last longer.

Response to Arguments

8. In response to the applicant's argument that Ries cannot anticipate the pump housing having a cavity defining a supply passage, it is the Examiner's view that such configuration is shown by Ries. As shown in Fig. 5, Ries shows the pump housing 112 includes a cavity 144 or 145 defining a supply passage for communicating lubricant from a sump within the axle housing to the pump.

9. In response to the applicant's argument that Ries does not show the bearings that is supported within the pump housing independent of the axle housing, Ries shows, in Fig. 5, the pump housing 112 and 115 comprises a bearing cage (the races for bearing 55) supporting

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rotation of the input shaft, wherein the bearing cage is supported entirely within the pump housing independent of the axle housing and spaced an axial distance from the axle housing.

10. In response to the applicant's argument that Aikawa et al. fails to show any cover including a cavity as recited in claim 1, it is the Examiner's position that there are two housing sections shown in Fig. 1. The housing section on the right side of the figure is construed to be the axle housing and the housing section on the left side of the figure is interpreted as a pump housing. The pump housing shows a cavity surrounding the shaft 111 that provides as a supply passage for lubricant.

11. In response to the applicant's argument that the shaft 39 of Aikawa et al. is not an input shaft, it is the Examiner's understand that if there is a some sort of torque transferred from a shaft, then such shaft can be construed to be an input shaft. The shaft 39 as shown certainly delivers torque to the meshed gear 31.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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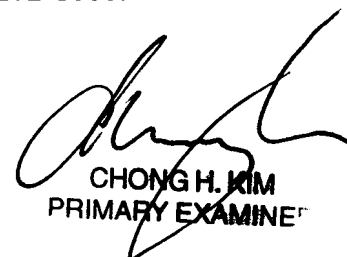
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (571) 272-7108. The examiner can normally be reached on Monday - Friday; 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

chk
May 29, 2007



CHONG H. KIM
PRIMARY EXAMINER